



U.S. Department of Transportation
**National Highway Traffic Safety
Administration**



May 8, 2025

VIA EMAIL

Eddie Gates
Director, Field Quality
Tesla, Inc.
45500 Fremont Blvd.
Fremont, CA 94538

Subject: Information Request ID PE24031-02

Dear Mr. Gates:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) is requesting certain information from Tesla, Inc. (Tesla) regarding Tesla's recent announcements and ongoing development of driving automation technologies. Tesla has publicly announced that it is developing an automated driving system (ADS) based on its current FSD Supervised advanced driver assistance system (ADAS). https://x.com/Tesla_AI/status/1915080322862944336 ("FSD Supervised ride-hailing service is live for an early set of employees in Austin & San Francisco Bay Area This service helps us develop & validate FSD networks, the mobile app, vehicle allocation, mission control & remote assistance operations[.]"). As you are aware, NHTSA has an ongoing defect investigation (PE24031) into FSD collisions in reduced roadway visibility conditions.

The agency would like to gather additional information about Tesla's development of technologies for use in "robotaxi" vehicles to understand how Tesla plans to evaluate its vehicles and driving automation technologies for use on public roads. Based on public statements, the agency understands that Tesla first plans to operate a fleet of Model Y vehicles in Austin, TX on public roadways in June 2025 and that Tesla may offer paid rides while operating "fully autonomously" at that time with potential expansion to other cities this year.¹ Given the scope of the effort Tesla has described, the Agency is requesting the information as detailed below to understand Tesla's technologies and operational use cases further, including to assess the ability of Tesla's system to react appropriately to reduced roadway visibility conditions.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject system**: the suite of software, hardware, data, and any other related systems on

¹ Tesla Q1 2025 Financial Results and Q&A Webcast, <https://youtu.be/vs4cfyyMWhQ?t=2142>

or off a vehicle that contributes to the operation of the driving automation technologies Tesla is developing for robotaxi operations.

- **Subject vehicles:** all vehicles equipped with the subject system manufactured for operation in the United States, including, but not limited to, the District of Columbia, and current U.S. territories and possessions.
- **Tesla:** Tesla, Inc., all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of Tesla (including all business units and persons previously referred to), who are or were involved in any way as of January 1, 2015 with any of the following related to the subject system or subject vehicles:
 - a. Design, engineering, analysis, modification or production (e.g., quality control);
 - b. Testing, assessment or evaluation;
 - c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, lawsuits or arbitrations; or
 - d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.
- **Document:** “Document(s)” is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall

include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by Tesla, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, “document(s)” also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by Tesla or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms “claim,” “consumer complaint,” “dealer field report,” “field report,” “fire,” “fleet,” “good will,” “make,” “model,” “model year,” “notice,” “property damage,” “property damage claim,” “rollover,” “type,” “warranty,” “warranty adjustment,” and “warranty claim,” whether used in singular or in plural form, have the same meaning as found in 49 C.F.R. § 579.4.

In order for my staff to evaluate the subject system, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as Tesla has previously provided a document to ODI, Tesla may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After Tesla’s response to each request, identify the source of the information and indicate the last date the information was gathered.

1. Based on Tesla’s public statements described above, NHTSA understands that Tesla is developing an automated driving system (ADS) based on its current FSD Supervised system, which Tesla has labeled an advanced driver assistance system. State the name(s) of the system(s) that will be used in robotaxi development and deployment as well as Tesla’s position on the SAE Level classification for the purposes of reporting under NHTSA’s Standing General Order on crash reporting.²
2. Describe Tesla’s plans to develop, test, and commercialize a robotaxi or analogous technologies on public roadways, including details regarding:

² <https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting>

- a. The number of vehicles by make and model anticipated at start of on-road operations and within the subsequent 12 and 24 months.
 - b. To the extent that Tesla plans to use any new vehicle models in the next 24 months, explain whether any vehicles that do not fully comply with Federal Motor Vehicle Safety Standards (49 C.F.R. Part 571) will be operated on public roadways, and state whether Tesla plans to seek any FMVSS exemptions.
 - c. The expected timetable for availability of a robotaxi or similar service to the public or other groups.
 - d. The expected timetable for availability of robotaxi technology for operation on vehicles controlled by people or entities other than Tesla and whether Tesla will require such individuals or entities to meet certain requirements to ensure safe operations.
 - e. The locations anticipated at start of on-road operations and within the subsequent 12 and 24 months.
 - f. Whether and how vehicles will be supervised or otherwise monitored by Tesla in real time.
 - g. Use of any teleoperation technologies such as remote driving and remote assistance and the limits of control authority for remote input to system/vehicle operation.
 - h. The roles and responsibilities of any in-vehicle or remote staff involved in monitoring, supervising, or intervening in system operation.
3. Describe the driving automation system(s) that will be used for the robotaxi effort and any relationship to Tesla's existing FSD Supervised product available to consumers today.
 - a. Descriptions of each perception sensor (including count and location), each compute subsystem, and overall system architecture for perception, planning, actuation, and performance monitoring/logging.
 - b. The role(s) of any cameras or other sensors within the vehicle cabin for the robotaxi system's safe operation when supervised and unsupervised.
 - c. Explanations of differences in system implementation for the robotaxi and FSD Supervised.
 - d. Describe the maximum control authority for the system when engaged including commanded speed, acceleration, braking, steering angle, permissible gear selection states while engaged, and limits on specialized maneuvers (e.g., reversing, parking, etc.).
 - e. Description of whether Tesla complies fully or partially with any industry standards, best practices, or guidance for the development and safety assurance of driving automation systems (e.g., SAE J3018, ISO/TS 16949, ISO 26262, SOTIF, UL4600, etc.).

4. Provide a detailed description of the operational design domain (ODD) for the robotaxi driving automation system, including an explanation of:
 - a. ODD elements³ and associated thresholds for the ODD for each automation feature.
 - b. The set of ODD elements that are monitored by the automation system.
 - c. The set of ODD elements that are solely monitored by any in-vehicle or remote staff.
 - d. The designed response of the automation feature, for each ODD element, if a system limit is exceeded or an ODD exit occurs.
 - e. Specific operational restrictions Tesla is implementing (e.g., relating to time-of-day, weather, geofencing, maximum speed) and whether each operational restriction is implemented primarily to ensure safe operations within the subject system's ODD.

5. Describe how Tesla plans to determine whether its robotaxi system has achieved acceptably safe behavioral competency⁴ for a given ODD scope including:
 - a. Establishing behavioral competency thresholds for supervised on-road operations.
 - b. Establishing behavioral competency thresholds for on-road operations without real-time supervision.
 - c. Determining which behavioral competencies (and associated ODD elements) do not satisfy established thresholds for on-road operations both with and without real-time supervision.
 - d. How this approach aligns with or differs from Tesla's processes for FSD Supervised.

6. Explain Tesla's approach for monitoring in-use interventions for the robotaxi system as it relates to:
 - a. Defining and tracking the types and frequency of disengagements or other human interventions – including both in-vehicle and remote interventions – and their relationship to safe driving behaviors.
 - b. Provide the current metrics for disengagements/interventions for the robotaxi system.
 - c. Planned differences in monitoring disengagements/interventions in comparison to Autopilot and FSD Supervised.

7. Describe Tesla's design and approach for emergency scenarios including:

³ The description ODD elements should include, at minimum, those identified in SAE J3016 APR2021, i.e., conditions under which the system is “specifically designed to function, including, but not limited to, environmental, geographical, and time-of-day restrictions, and/or the requisite presence or absence of certain traffic or roadway characteristics.” See [AVSC00002202004](#) for examples of specific elements that may be addressed.

⁴ Behavioral competency refers to the expected and measurable capability of the system operating a vehicle within its ODD.

- a. Crash detection and response, including adequacy of minimal risk conditions depending on crash scenario.
 - b. The designed/intended maneuvers and/or other responses to achieve a stable stopped condition – i.e., a minimal/mitigated risk condition (MRC) – or takeover following a crash, system failure, ODD exit, or other scenario requiring an appropriate disengagement or other intervention.
 - c. Planned operational steps following achievement of an MRC.
 - d. Subject system and subject vehicle interactions with first responders.
 - e. Tesla’s operational response to incidents occurring with the subject system.
8. Explain the methods and processes (e.g., establishing a safety case) in detail that are employed by Tesla to determine readiness of the robotaxi system for on-road use with and without supervision.
- a. Explain whether Tesla employs a safety case or similar methodology. Describe how Tesla gathers and assesses evidence that its robotaxi system is ready for on-road use under supervision and without supervision.
 - b. List all processes Tesla has established for internal decision making on whether the system is acceptably safe for on-road use (e.g., satisfying whether safety claims in a safety case have been fully satisfied). Identify the accountable decision makers by name, role, and organizational structure.
 - c. List and describe each process that Tesla uses to establish metrics and associated baselines or thresholds that quantify acceptable performance for on-road use. Include descriptions of how the metrics are established.
 - d. Describe Tesla’s verification and validation methodology for the robotaxi product for metrics/thresholds including:
 - i. How Tesla identifies and handles potential performance gaps and regressions during development and while in use.
 - ii. How changes or updates to existing metrics or thresholds are approved.
 - iii. Tesla’s use of simulation, test track, and on-road testing as well as whether Tesla is leveraging data from consumer owned vehicles for verification or validation efforts of the robotaxi product.
 - e. To the extent that Tesla is using performance thresholds or metrics established based on human drivers, identify the source of the underlying data Tesla is using to establish the thresholds/metrics.
 - f. Explain how the system is designed to comply with traffic safety laws and how Tesla will monitor for compliance with traffic safety laws including traffic control devices, interactions with construction zones, and interactions with first responders.
 - g. Describe Tesla’s plan to collect, evaluate, and retain data to continuously monitor the ongoing operational performance metrics/thresholds.
 - h. Describe Tesla’s approach for determining if an operational performance metric/threshold has been violated.

9. Describe how Tesla intends to ensure the safety of its robotaxi operations in reduced roadway visibility conditions, such as sun glare, fog, airborne dust, rain, or snow. In your response, describe whether Tesla's approach differs, if at all, for a ride in which the reduced roadway visibility condition exists at the beginning of the ride and a ride in which the reduced roadway visibility condition first appears or is encountered during a ride.

Legal Authority for This Request

This letter is being sent to Tesla pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports. It constitutes a new request for information.

Civil Penalties

Tesla's failure to respond promptly and fully to this letter could subject Tesla to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) The Vehicle Safety Act, 49 U.S.C. § 30165(a)(3), provides for civil penalties of up to \$27,874 per violation per day, with a maximum of \$139,356,994 for a related series of daily violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. *See* 49 C.F.R. § 578.6(a)(3). This includes failing to respond completely, accurately, or in a timely manner to ODI information requests.

If Tesla cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, Tesla does not submit one or more requested documents or items of information in response to this information request, Tesla must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

Confidential Business Information (CBI)

If Tesla's response contains any information that you claim is confidential business information, Tesla must submit its request for confidential treatment and any files containing CBI to NHTSA's Office of the Chief Counsel via the CBI Portal or a secure electronic file transfer link. Please see enclosure 1 for additional instructions on submitting a request for confidential treatment that is compliant with 49 C.F.R. Part 512 (specifically, a request for confidential treatment must include the four required parts that are discussed in enclosure 1).

If you choose not to submit your request and files containing CBI to NHTSA's Office of the Chief Counsel via the CBI Portal, please notify the investigator referenced in this IR to ensure that the secure file transfer link for your request for confidential treatment and any files containing CBI are directed to the Office of the Chief Counsel accordingly.

In addition to submitting a request for confidential treatment and files containing CBI directly to NHTSA's Office of the Chief Counsel, Tesla must also submit its request for confidential treatment, the files containing CBI, and their corresponding redacted versions directly to ODI via the Safety Defect Investigations (SDI) Portal. The requests for confidential treatment and certification documents are not confidential so these documents should be uploaded as non-confidential files.

Please refer to PE24031 in Tesla's response to this letter and in the request for confidential treatment that Tesla may submit.

Due Date

Tesla's response to this letter must be submitted to this office by **June 19, 2025**. If Tesla finds that it is unable to provide all of the information requested within the time allotted, Tesla must request an extension from me no later than five business days before the response due date. If Tesla is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information Tesla then has available, even if an extension has been granted. If you have any technical questions concerning this matter, please contact Thomas Haugh of my staff.

Sincerely,

Tanya Topka

Tanya Topka, Director
Office of Defects Investigation

Enclosure 1, Information for Requests for Confidential Treatment.

ENCLOSURE 1 – INFORMATION FOR REQUESTS FOR CONFIDENTIAL TREATMENT

If you believe that your response contains any material that you claim is confidential business information, submit these materials to NHTSA's Office of the Chief Counsel in accordance with 49 C.F.R. Part 512. **All requests for confidential treatment must be submitted directly to the Office of the Chief Counsel via the Confidential Business Information (CBI) Portal or a secure file transfer link for your submission addressed to the Office of the Chief Counsel. If you are not currently registered for the CBI Portal, you may send a registration request to cbi-helpdesk@dot.gov. In addition to directly submitting the files to the Office of the Chief Counsel, you will also need to submit your request, the files containing CBI, and their corresponding redacted versions directly to ODI through the Safety Defect Investigations (SDI) Portal.**

Requests for confidential treatment are governed by Part 512. A current version of this regulation is available on the internet at <http://www.ecfr.gov> by selecting Title 49 "Transportation," selecting "Parts 500 – 599" and then selecting Part 512 "Confidential Business Information."

How to request confidential treatment:

NHTSA is currently treating electronic submission as an acceptable method for submitting confidential business information to the agency under Part 512. If you claim that any of the information or documents provided in your response constitutes confidential business information within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, you must submit the information or documents directly to the Office of Chief Counsel via the CBI Portal or request a secure file transfer link from the ODI contact listed in your Information Request. You must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with Part 512, to the Office of the Chief Counsel. Do not send a hardcopy of a request for confidential treatment to NHTSA's headquarters.

Your request must include a request letter that contains supporting information, pursuant to Part 512.8. Your request must also include a certificate, pursuant to Part 512.4(b) and Part 512, Appendix A.

You are required to submit one unredacted "confidential version" of the information for which you are seeking confidential treatment. Pursuant to Part 512.6, the words "ENTIRE PAGE CONFIDENTIAL BUSINESS INFORMATION" or "CONFIDENTIAL BUSINESS INFORMATION CONTAINED WITHIN BRACKETS" (as applicable) must appear at the top of each page containing information claimed to be confidential. In the latter situation, where not all information on the page is claimed to be confidential, identify each item of information for which confidentiality is requested within brackets: "[]."

You are also required to submit one redacted "public version" of the information for which you are seeking confidential treatment. Pursuant to Part 512.5(a)(2), the redacted "public version" should include redactions of any information for which you are seeking confidential treatment (i.e., the only information that should be unredacted is information for which you are **not** seeking confidential treatment).

For questions about a request for confidential treatment, please contact Dan Rabinovitz in the Office of the Chief Counsel at Daniel.Rabinovitz@dot.gov or (202)366-8534.